North Umpqua Hydropower Mitigation Fund
Project Nomination Form

Project Name: Pass Creek Restoration

Total Mitigation Funds Requested For this Fiscal Year:$ 96,500

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Type of Project (mark one that applies):

Wetland/stillwater habitat ___	Vegetation management X
Terrestrial species connectivity ___	Riparian/aquatic species connectivity X
Erosion control X	Aquatic Habitat X

Explanation of why this project is time critical:

This project accomplishes multiple mitigation impacts in one project. It will remove a barrier culvert, decommission 0.7 miles of stream side road, and implement 0.7 miles of instream restoration. It will also include noxious weed removal and native planting. The Partnership for the Umpqua Rivers (PUR) will be a partner on this project.

Description of hydropower project caused impacts that project is addressing (aquatic, terrestrial and natural resource related including wetland, aquatic & terrestrial connectivity, vegetation management, soil loss/erosion, etc.). Be specific how/what the project mitigates:

This project addresses multiple hydropower mitigation impacts both aquatic and terrestrial.

Aquatic connectivity – the removal of a barrier culvert on East Fork Pass Creek
Aquatic habitat ecology – instream restoration in 0.7 miles of Pass Creek
Soil productivity - decommissioning of 0.7 miles of road
Vegetation management – the removal of noxious weeds and planting on native species

Point of hydropower induced impact:	**Location of proposed mitigation project:**
Legal: T 26 S R 03 E Sect. 20	Legal: T 24 S R 01 W Sect. 15
6th field subwatershed: Deception Creek- North Umpqua River	6th field subwatershed: Pass Creek
5th field watershed: Middle North Umpqua River	5th field watershed: Canton Creek
Administrative Unit: Forest Service	Administrative Unit: BLM

Description of project objectives, activities, *measurable* benefits, and expected accomplishments:

Project description:
Pass Creek is an important tributary Canton Creek, which is an important tributary to Steamboat Creek, a tributary to the North Umpqua River. It provides spawning and rearing habitat for summer and winter steelhead, cutthroat trout, and Pacific lamprey. It has been heavily impacted by land use and thus has very little large wood, pools, or spawning gravel in the reach. Additionally, a barrier culvert restricts access to East Fork Pass Creek for all juvenile salmonids and lamprey and is a seasonal barrier for adult salmonids. An unused stream side road also exists in the reach which decreases riparian soil productivity and interrupts hydraulic pathways. This project will add 50 logs and fall 80 trees into Pass Creek to increase aquatic habitat diversity and capture important spawning gravels. It will also permanently remove a large barrier culvert allowing access to East Fork Pass Creek for all life stages of fish throughout the year. Finally, the project will decommission 0.7 miles of road within the riparian area increasing soil productivity and restoring hydrologic connections. Partners on the project include the Partnership for the Umpqua Rivers (PUR).

Project objectives:

1. To permanently remove a barrier culvert. This project will remove a partial barrier culvert that blocks access to East Fork Pass Creek to juvenile salmonids and lamprey and is a seasonal barrier to adult salmonids. *Measureable benefit: Increase fish passage to East Fork Pass Creek for juvenile and adult salmonids, lamprey, and amphibians.*
2. To increase habitat complexity in Pass Creek: Logs and whole trees will be strategically added to 0.7 miles of Pass Creek to create complex pools and to capture important spawning gravels. *Measureable benefit: Triple the number of pools in the restoration reach and create complexity in those pools (large wood). Increase the amount of spawning gravel three to four fold in the restoration reach.*
3. Decommission 0.7 miles of streamside road. The road in the riparian area (Figure 1) will be decommissioned. Culverts and cross drains will be removed, and the road surface will be ripped to break up compaction. *Measureable benefit: Restore soil productivity and hydrologic connection to 0.7 miles of existing riparian road.*
4. To eradicate noxious weeds and plant native species to increase diversity in riparian areas. Scotch broom and Himalayan blackberry will be cut and sprayed with herbicide. Native shrubs and trees will be planted in the riparian areas to increase diversity. *Measureable benefit: Cut and spray all noxious weeds found in the riparian areas in Pass Creek. Plant 800 native shrubs and trees in the restoration reach, focusing on Big Leave Maple, Black Cottonwood, Cedar, etc. to increase the diversity in the riparian areas.*

Expected Accomplishments:
This project will provide habitat complexity and increased spawning gravels to 0.7 miles of Pass Creek. Additionally, a barrier culver will be removed permanently and 0.7 miles of riparian road will be decommissioned. Finally, noxious weeds will be treated in riparian areas and 800 native plants will be planted to focus on riparian species diversity. It is expected that summer and winter steelhead runs will increase significantly in Pass Creek as a result of this and other planned instream restoration in the watershed in the long term. This will increase the total amount of fish returning to the North Umpqua River and will lead to better recreational fishing opportunities.
This reach is the same reach featured in the famous "Pass Creek video" (http://vimeo.com/50181875). The current plan is to do a video production with possibly Oregon Field Guide or some other group on

the history of the Pass Creek video and how it changed riparian protections and management for both the Forest Service and BLM. The video would also highlight the current protections in place for riparian areas and streams and the current restoration project and its benefits to the watershed. The USFS Mitigation Fund would also be discussed in the video. Additionally, we are planning on creating a "Frank Moore Trail" which will follow the decommissioned road and have interpretive signs discussing past logging practices vs. today's riparian protections. There will also be interpretive signs on watershed restoration.

Identify any previous work completed (prior year accomplishment of multi-year project, planning, design work, etc.):

There has been no previous work completed in Pass Creek to my knowledge. This will be the first mitigation fund project in that watershed.

Proposed budget:

Activity	*Personnel*	*Contract/Materials*	*Vehicles*	*Total*
Planning/NEPA	$3500			$ 3500
Engineering design & Contract preparation	$3500			$ 3500
Contract costs		$71,500		$ 71,500
Contract Administration	$4000			$ 4000
Non-contract implementation		$8000		$8000
Monitoring	$3500	$2000		$ 5500
Totals	$ 15,000	$ 81,500		$ 96,500

If project is multi-year proposal, include budget table for each year of project

Identify other funding (includes appropriated funds) or confirmed, external partnerships of project

Source	Value of contribution	Description of contribution
OWEB (PUR)	$ 50,000	Unsecured match

Proposed project schedule and timeline, including projected date of accomplishment:

Spring 2014: Finalize site designs and begin NEPA process.
Summer 2014: Pre-project monitoring: Photopoints, habitat surveys, etc.
Spring 2015: Acquire and deliver materials to project reach
Summer 2015: Implement project
Summer 2016: Post project monitoring: Photopoints, habitat surveys, etc.

The project will be accomplished by September 15, 2015.

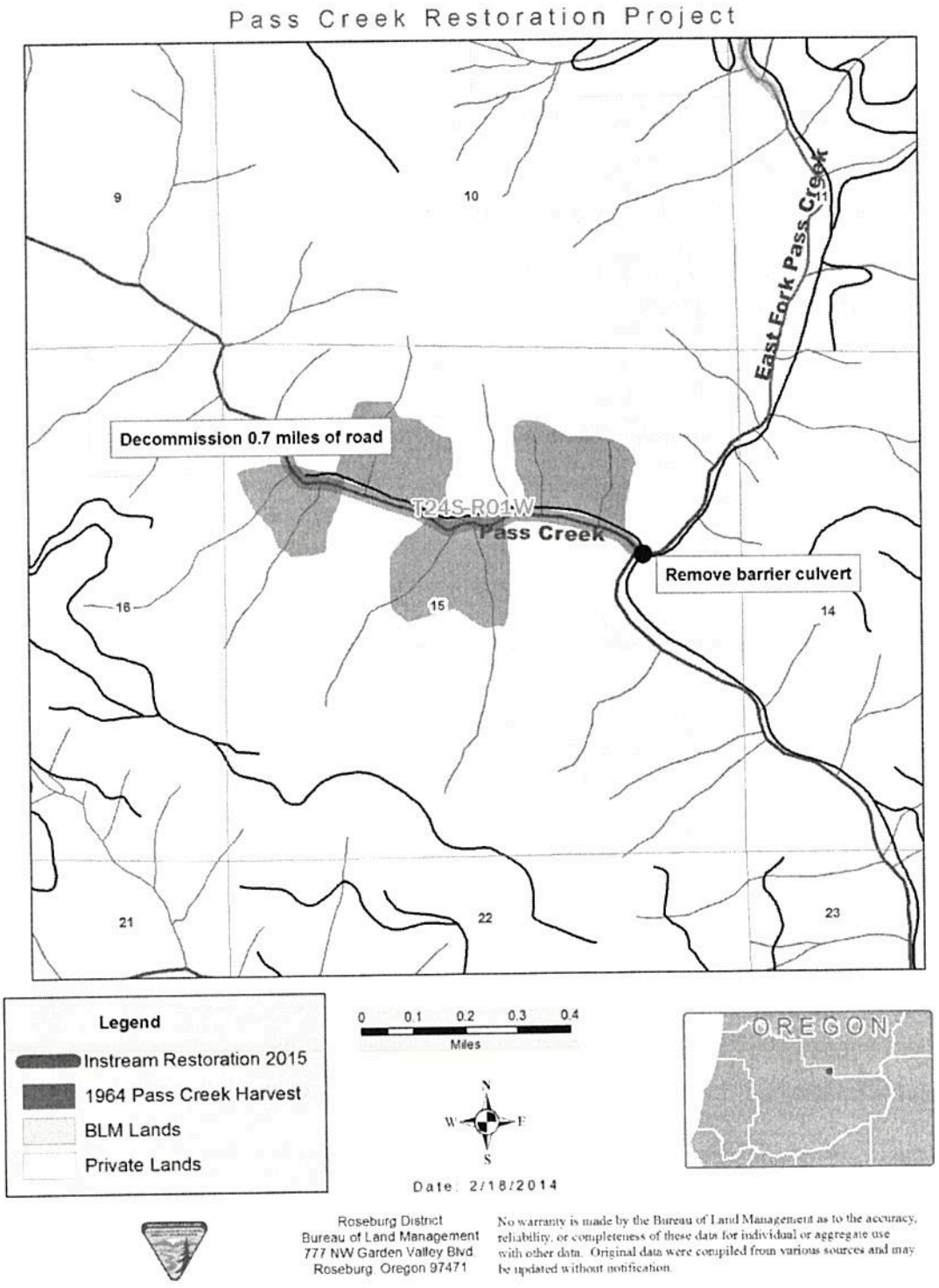

Figure 1: Project map of the Pass Creek Restoration project.

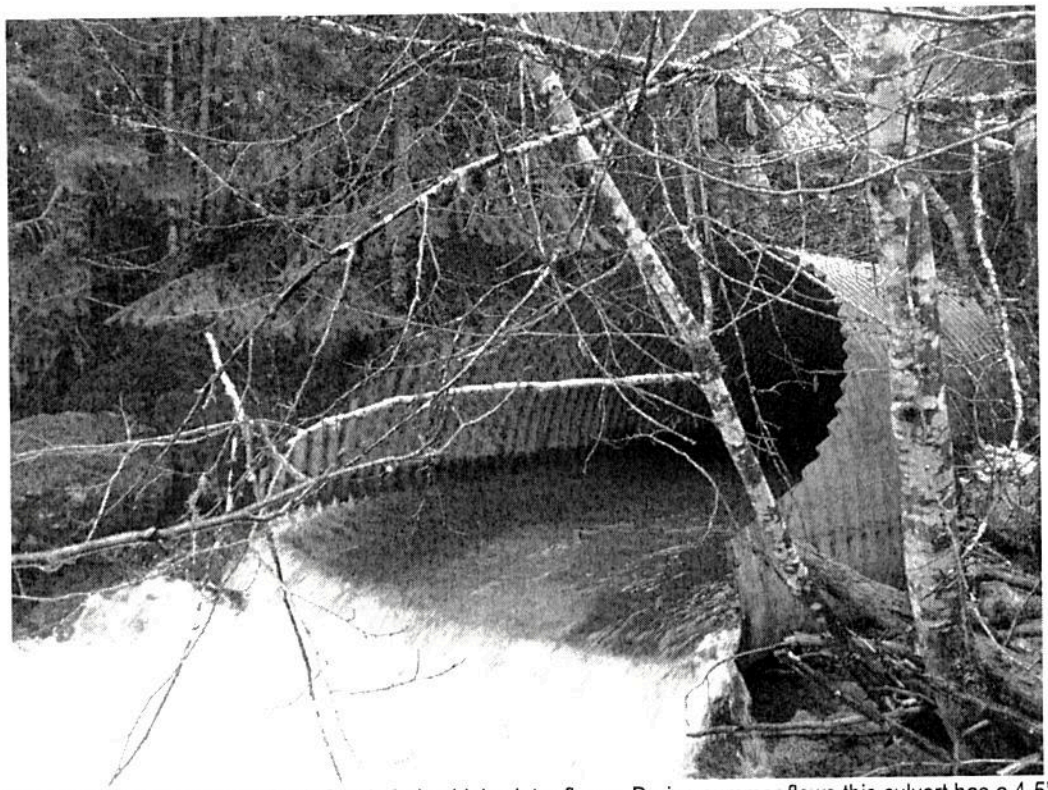

Figure 2: Barrier culvert on East Fork Rock Creek during high winter flows. During summer flows this culvert has a 4-5' jump at the outlet blocking passage of juvenile fish and lamprey. The culvert will be removed as part of this project.

Figure 3: Riparian road along Pass Creek that will be decommissioned at the end of the project. We are hoping to create a trail dedicated to Frank Moore with interpretive signs.

Figure 4: Pass Creek in the instream restoration reach at high winter flows. Notice the high gradient, lack of pools, and lack of spawning gravels. Large wood and trees will be added to this reach to create those features.

Figure 5: A photo of the only effective log jam in the Pass Creek instream restoration reach. The log jams created will mimic this one. Notice the accumulation of spawning gravels, the reduced stream velocity, and the complex edge habitat.